

**RESPONSIVENESS SUMMARY FOR COMMENTS RECEIVED ON
NEW YORK CITY'S REPORT TO ADDRESS POLYCHLORINATED BIPHENYLS
IN ITS SCHOOLS**

INTRODUCTION

This document provides a summary of the public comments EPA received pertaining to New York City's May 24, 2013 report to address polychlorinated biphenyls (PCBs) in its schools and EPA's responses to those comments. The May 24, 2013 report presents New York City's Preferred Citywide Remedy which is described below.

SUMMARY OF COMMUNITY RELATIONS ACTIVITIES

The United States Environmental Protection Agency (EPA) held a public comment period from May 14, 2014 to June 30, 2014. EPA issued a media advisory on May 14, 2014 announcing the public comment period and the scheduling of the following public meetings:

- May 28, 2014, at Highbridge Green School, 200 W 167th Street, Bronx;
- June 3, 2014, at Stuyvesant High School, 345 Chambers Street, Manhattan;
- June 5, 2014, at Queens Gateway, 160-20 Goethals Ave, Queens;
- June 9, 2014, at New Dorp High School, 465 New Dorp Lane, Staten Island; and
- June 11, 2014: P.S. 133 William Butler, 610 Baltic St., Brooklyn.

New York City's May 24, 2013 report and related information were made available to the public on the EPA Region 2 web site at:

- <http://www.epa.gov/Region2/pcbs/index.html>

The transcripts of the public meetings can also be found at this web address.

An electronic mailbox was established for receipt of comments at:

- PCBsPreferredRemedy.Region2@epa.gov

EPA prepared an informational flyer that the New York City Department of Education (DOE) translated into Chinese, French, Haitian/Creole, Korean, Russian, Spanish, Bengali, Arabic, and Urdu. The DOE agreed to provide the flyers to the Community Education Councils for the school districts and EPA posted the flyers to the aforementioned web site.

OVERVIEW

The public provided varied responses to New York City's Preferred Citywide Remedy which consists of the following components:

- Implementation of the PCB Light Fixture Removal Program;
- Implementation of the Protocol to inspect and respond to ballast issues;
- Implementation of Best Management Practices which are to:
 - Inspect and remediate caulk as necessary (e.g., remove and replace, patch and repair, and/or encapsulate caulk); and
 - Inspect and maintain ventilation systems per design;
- Removal of caulk during Capital Improvement Program (CIP) Projects under EPA-approved construction protocols;
- Evaluation, excavation & replacement of soil associated with the CIP;
- Continuation of the Long-Term Monitoring Program in the Pilot Schools; and
- Performance of Additional Studies to determine next steps.

EPA provided the Preferred Citywide Remedy to a panel of three independent peer reviewers along with a series of charge questions; information on the peer review can be found at: <http://www.epa.gov/Region2/pCBS/index.html>. EPA's responses to comments received at the public meetings, in writing, and electronically during the public comment period are summarized below. The peer reviewers' responses which are relevant to issues raised by the public are also included below in those responses.

SUMMARY OF COMMENTS AND RESPONSES

EPA received comments from sources including private citizens and from the following groups or public officials:

- New York Lawyers for the Public Interest;
- The PS 163 (Manhattan) PTA;
- Success Academy Charter Schools;
- New York State Assembly member Linda B. Rosenthal;
- New York City Council Member Corey Johnson; and
- Mount Sinai Selikoff Centers for Occupational Health.

A summary of the significant and relevant comments provided at the public meetings and contained in the letters and electronic correspondence that were received during the public comment period, as well as EPA responses, have been organized into the following topics:

- Design of the Pilot Study;
- Pilot Study Sampling;
- The Findings of the Pilot Study;
- Format of the Summary Report;
- PCB Light Ballasts;
- Prioritization of Schools for Remediation;
- Ventilation in the Schools;
- Best Management Practices;
- Health Concerns;
- Outreach to the Public; and
- Other Comments.

The comment summaries and EPA's responses thereto, are provided below.

Design of the Pilot Study

Comment Number 1: *The Pilot Study's focus on 5 schools is too small a sample and may not be representative of all schools.*

Response: The selection of Pilot Schools was not intended to be a statistical representation of all New York City schools. Schools were selected based on various factors including construction type, ventilation system, and age. The schools provided differing structural/mechanical environments under which the remedial alternatives could be evaluated.

Comment Number 2: *Please explain why the caulk in other schools is not being tested for PCBs.*

Response: The federal PCB regulations do not require the testing of building materials for PCBs. The DOE has decided not to test caulk for PCBs since it is not a regulatory requirement. EPA's guidance (<http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/pdf/caulk-fs.pdf>) recommends that schools should attempt to identify any potential sources of PCBs that may be present in the building, including testing samples of caulk and looking for other potential PCB sources (e.g., old transformers, capacitors, or fluorescent light ballasts that might still be present at the school). It should be noted that for capital improvement projects at schools where PCBs are suspected, the New York City School Construction Authority (SCA) performs PCB testing of caulk located in the project areas.

Pilot Study Sampling

Comment Number 3: *Air sampling was typically not performed under worst-case conditions. This could bias the results.*

Response: Air sampling was generally performed under typical ventilation and other operating conditions appropriate for the time of year that the sampling was being performed. The intent of the air sampling was to determine the actual concentrations of PCBs that the school community is exposed to in order to assess the risk. EPA acknowledges that typical operating conditions can vary, and the Agency will suggest to New York City that standard operating procedures be developed for collecting air samples in the Pilot Schools under different operating conditions.

Comment Number 4: *The window caulk in both PS 309K and 199M must be tested since this caulk may be a significant source of PCBs that has not been considered.*

Response: As explained in the response to Comment Number 2 above, the federal PCB regulations do not require the testing of building materials for PCBs. However, since EPA's guidance recommends testing to identify potential sources of PCBs, the Agency will likewise recommend to New York City that the window caulk at these schools be tested.

Comment Number 5: *The criteria against which the results of air and wipe samples are evaluated should be health-based and be clearly explained when sampling results are provided to the public.*

Response: Generalized health-based criteria do not exist but can be developed on a site-specific basis. EPA has developed risk-based criteria for indoor air; these criteria can be found at: <http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/pdf/maxconcentrations.pdf>. While it would be possible to develop wipe sampling criteria for New York City schools, the regulatory level of 10 micrograms per 100 square centimeters was used as the criterion for the Pilot Study. This level is typically used in PCB cleanups. It should be noted that wipe sample results in the schools are generally much lower than this regulatory level.

Comment Number 6: *The recommendation was made to isolate PCB-containing caulk to eliminate migration of PCBs.*

Response: Since the PCB regulations do not authorize the use of caulk with PCBs at or above 50 parts per million (i.e., "PCB Caulk"), it must ultimately be removed. Encapsulation was studied to determine if it would significantly reduce potential exposures prior to removal, and it was found that encapsulants are ineffective for PCBs at concentrations exceeding approximately 1,000 parts per million. EPA Region 2 has suggested to New York City that it consider using a physical barrier, such as metallic tape, to prevent migration.

Comment Number 7: *EPA should pursue independent data collection to verify the accuracy and quality of New York City's results.*

Response: At the present time EPA has no basis for questioning the quality or accuracy of the data collected during the Pilot Study. Prior to implementation of field activities, EPA reviewed New York City's planning documents to ensure that the Pilot Study would yield results of a high quality. TRC Companies, Inc. (TRC), a consulting firm with extensive experience in the field of environmental data collection, conducted the Pilot Study and EPA performed oversight of TRC's Pilot Study work.

The Findings of the Pilot Study

Comment Number 8: *Please explain if PCB air concentrations vary temporally and by setting.*

Response: PCB air concentrations can vary temporally and by setting. There are a number of interrelated factors that potentially influence the concentration of PCBs in the indoor air. These factors may include the specific type and concentration of PCBs; the type, number and location of the PCB sources; the dimensions of the room or area under consideration; the types of building materials present; the temperature and the condition of the ventilation system.

Comment Number 9: *Negative wipe sample results alone do not support a conclusion that dust removal represents a significant remedial measure for mitigation of PCBs in indoor environments.*

Response: EPA Region 2 agrees with the comment. While exposure to PCBs in dust is not a significant exposure issue in New York City schools, removal of PCB-contaminated dust could be a significant remedial measure in other school districts.

Comment Number 10: *Removal or partial removal of PCB-contaminated substrate should be added as a potential additional remedial measure to consider when removing PCB caulk.*

Response: EPA Region 2 believes that the substrate must be tested if there is reason to believe that PCBs are present and may present a risk. However, the federal PCB regulations do not require the testing of substrate in contact with PCB caulk. If this material is tested and PCBs are found that could be attributable to migration from the caulk, the material is considered a PCB remediation waste and must be addressed in accordance with federal requirements (40 CFR 761.61).

Comment Number 11: *None of the alternatives is effective in the long term.*

Response: The Pilot Study has shown that there are a multitude of factors in a school that can influence the levels of PCBs in the air and that no single alternative has shown long-term effectiveness. All three peer reviewers have concerns with one or more of the remedial

alternatives. However, EPA Region 2 believes that a multi-component approach to addressing the problem in which several remedial approaches are implemented has the potential for reducing exposure.

Comment Number 12: *Isolate PCB-containing caulk to prevent migration.*

Response: In accordance with the federal PCB regulations, PCBs at or above 50 parts per million is an unauthorized use and must ultimately be removed. PCB-containing caulk identified in New York City schools typically has high concentrations of PCBs (on the order of thousands to hundreds of thousands of parts per million) and the caulk is sometimes difficult to isolate.

Comment Number 13: *Leaking PCB light ballasts and leaked PCBs in light fixtures present imminent PCB exposure and regulatory concerns separate and distinct from PCB caulk.*

Response: Both leaking PCB light ballasts and PCB caulk are considered by EPA to be primary sources of PCBs in the school environment (http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/pdf/pcb_EPA600R12051_final.pdf) and are not authorized uses under the federal PCB regulations.

Comment Number 14: *Decontamination or treatment methods should be integrated into caulk removal options.*

Response: Some of the peer reviewers consider the Pilot Study remedies to be appropriate but recommend that additional measures be considered (such as decontamination/treatment of the substrate or a combined approach for treating and encapsulating the PCB source). However, EPA Region 2 believes that, to date, there is no effective decontamination or treatment method that can be practically implemented to reduce the high concentrations of PCB in caulk to acceptable levels. However, there are methods potentially available to treat contaminated substrate in contact with the caulk. The National Aeronautics and Space Administration has developed a substance that has been shown to have some effectiveness in extracting PCBs from building materials. Decontamination fluids that are commercially available could also potentially be used to reduce the PCB concentrations at the surface of the substrate.

Comment Number 15: *Soil sampling within 10 feet of the building facade after renovations is ill-advised. The presumption that soil contamination is only caused by PCBs released from renovation activities is wrong and there is ample evidence in the literature showing that high PCB soil levels can be found around buildings containing intact caulk that has never been disturbed.*

Response: The peer reviewers do not believe that proactively evaluating PCBs in the soil will significantly reduce exposure. While EPA acknowledges that contamination of soil adjacent to school buildings could be due to factors other than caulk (such as the historic import of PCB-contaminated fill), the Agency is aware of situations in which PCB contamination was discovered after window renovations were completed and the renovation practices may have

caused the contamination. New York City has implemented a successful program to test and remediate PCB-contaminated soil found at schools with PCB caulk and EPA does not see a reason to eliminate or modify the program. PCBs in the soil that could be considered PCB Remediation Waste (as defined at 40 CFR 761.3) must be addressed in accordance with 40 CFR 761.61.

Format of the Summary Report

Comment Number 16: *The Summary Report is poorly organized and difficult to follow.*

Response: Two of the three peer reviewers believe that the report is written relatively clearly but needs better formatting, while one reviewer does not believe that the report is clear. The Summary Report is a technical document that is based on information presented elsewhere (e.g. in the Remedial Investigation and Feasibility Study reports). EPA has posted to its web site the relevant documents that support the Preferred Citywide Remedy and will request that New York City do the same. While EPA Region 2 believes that the organization and clarity of the report is adequate, the Region will advise New York City that it should consider revising its report as a result of the public comments.

PCB Light Ballasts

Comment Number 17: *There is a need to perform air testing, after a ballast failure occurs, prior to re-occupancy of the affected area.*

Response: The federal PCB regulations do not require the testing of indoor air. EPA believes that the re-occupancy protocols developed by New York City serve as a corrective action for PCBs that could be released from ballast failures. However, there could be other sources of PCBs present aside from the ballasts and EPA does not believe that the re-occupancy protocols provide assurance that the affected area is safe for use. EPA Region 2 believes that the indoor air must be tested after a ballast failure and has previously recommended this type of testing to New York City.

Comment Number 18: *Wipe sampling alone (in response to a ballast failure) is not adequate to characterize risk.*

Response: Wipe sampling is primarily used as a means to ensure that decontamination efforts have been successful; not risk characterization. The primary route of exposure in New York City Schools is believed to be through inhalation of PCB-contaminated air. EPA therefore agrees that wipe sampling alone is not adequate to characterize risk. It should be noted that some of the peer reviewers also believe wipe sampling alone is not appropriate. However, as previously explained in the response to Comment Number 17, the federal PCB regulations do not require the testing of indoor air. EPA Region 2 believes that the indoor air must be tested and has previously recommended to New York City that this testing should be performed.

Comment Number 19: *Instead of visual inspections of light fixtures, use other methods to identify potentially leaking ballasts (such as air testing).*

Response: EPA Region 2 recognizes that other methods are available to inspect light fixtures and each peer reviewer suggested a different inspection method (e.g., open the fixture, detect by odor, and perform air testing). We believe that visual inspections represent the minimum acceptable level of effort necessary to identify potentially leaking ballasts.

Comment Number 20: *New York City should provide summaries of intact and leaking ballasts (similar to the summaries prepared for the PS 178X, PS 309K and PS 199M Pilot Schools) for each school building undergoing a T-12 light fixture replacement.*

Response: EPA's research has shown that leaking PCB light ballasts represent a primary source of PCBs into the indoor air; please see the Agency's research findings at the following web site: http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/pdf/pcb_EPA600R12051_final.pdf. Submission of additional information on the frequency of leaking ballasts in NYC schools would not alter this conclusion, nor would it expedite New York City's court-ordered schedule to remove PCB lighting from its schools by December 31, 2016.

Comment Number 21: *Air sampling should be performed after lighting is replaced in a school.*

Response: EPA's guidance states that leaking fluorescent light ballasts could continue to release PCBs over several years and generate elevated levels of PCBs in air that students and teachers breathe (<http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/ballasts.htm>). It is therefore possible that surrounding building materials could absorb the released PCBs and re-emit them into the air, even after the lighting is replaced. EPA Region 2 believes that air sampling must be performed after lighting is replaced in a school in order to evaluate any remaining inhalation risks. However, the federal PCB regulations do not require sampling of the indoor air.

Comment Number 22: *The Summary Report overestimates the impact of PCB light fixture removal on indoor air levels.*

Response: Although the Summary Report may overestimate the impact of PCB light fixture removal, EPA's research has shown that leaking PCB light ballasts are a primary source of PCBs. While the removal of PCB lighting from the schools addresses a major source of PCB contamination, EPA recognizes that there could be other potential primary sources of PCBs in the schools (such as caulk) as well as secondary sources (i.e., building materials that were contaminated by releases of PCBs from primary sources).

Comment Number 23: *EPA did not initiate an enforcement action to address PCB violations resulting from leaking ballasts.*

Response: The presence of leaking PCB light ballasts in schools and other buildings is a national issue. EPA is working to develop a consistent approach for responding to situations of leaking PCB ballasts and other releases of PCBs from building materials. It should be noted that the DOE immediately responds to situations where PCB ballasts have released material outside of the fixture, and the DOE will have all PCB lighting removed from its schools by December 31, 2016.

Comment Number 24: *New York City must ensure that the ventilation is working in those schools where the lights need to be replaced.*

Response: EPA's guidance (<http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/ballasts.htm>) explains that one of the most likely ways that people are exposed to PCBs from fluorescent light ballasts is through breathing PCB-contaminated air. While there are no federal requirements for improving ventilation to address PCBs, EPA Region 2 believes that ventilation must be optimized in all schools where PCB sources (fluorescent light ballasts and others) could be present.

Prioritization of Schools for Remediation

Comment Number 25: *Schools should be prioritized for remediation based on air sampling. Furthermore, there should be long-term air testing in all schools with potential PCB contamination.*

Response: EPA's guidance recommends testing to determine if PCB levels in the air exceed EPA's public health levels. This guidance can be found at the following web address: <http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/pdf/caulkexposure.pdf>. All three peer reviewers believe air sampling would be an effective means of confirming a prioritization scheme. EPA Region 2 believes that air sampling would be an effective tool for prioritizing schools for remediation. Furthermore, we also believe that air sampling must be performed in all schools with potential PCB contamination that may present a risk to building occupants. However, as explained in prior responses air sampling is not required under the federal PCB regulations.

Comment Number 26: *Conduct a complete inventory of potential PCB sources in all New York City Schools, including exterior and interior caulk. More monitoring is needed to understand the extent, variability, and significant sources of PCBs in the schools.*

Response: The federal PCB regulations do not require that an inventory be compiled or that monitoring be performed. EPA's research efforts (http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/pdf/pcb_EPA600R12051_final.pdf) have shown that PCBs can be present in indoor air, dust, and on surfaces in school buildings with PCB-containing source materials, and are likely to be present in the soil near buildings with exterior PCB-containing caulk. Building occupants may be exposed to PCBs through expected normal contacts with these environmental media. For New York City schools, EPA believes that

the primary route of exposure to PCBs in New York City schools is through inhalation of PCB-contaminated air. Some of the peer reviewers believe that proactively addressing PCBs would significantly reduce exposure. EPA Region 2 believes that indoor air must be tested to determine if there is a concern, and to then address the sources contributing to the PCBs in the air.

Comment Number 27: *Field testing of encapsulants appears to be a waste of time.*

Response: EPA's research (<http://nepis.epa.gov/Adobe/PDF/P100FA5L.pdf>) showed that selecting proper encapsulants can effectively reduce the PCB concentrations at exposed surfaces. However, the encapsulation method has its limitations. To estimate the upper limit of the PCB concentration in the source to be encapsulated, several factors must be considered, including the mitigation goals, the properties of the PCB source, the properties of the encapsulant, and the environmental conditions.

Ventilation in the Schools

Comment Number 28: *Several commenters stated that there is an overreliance on ventilation as a method to address PCB exposure. Other commenters remarked that improving ventilation should be the highest priority for the city-wide remedy, and that all areas in a school should be ventilated.*

Response: EPA considers ventilation to be one element of a multi-component approach to addressing PCBs in the schools. All of the peer reviewers recommend that ventilation be optimized to minimize levels of PCBs in the air. EPA's fact sheet on current best practices for PCBs in caulk (<http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/caulkinterim.htm>) recommends ensuring that the ventilation system is operating as designed, and to repair or improve the system if it is not. Other EPA guidance, which can be found at <http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/maxconcentrations.htm> recommends that the concentrations of PCBs in indoor air be kept as low as is reasonably achievable. In addition to reducing PCB concentrations in the indoor air, improved ventilation has the benefit of reducing other pollutants such as mold. Given the benefits of improved ventilation, EPA considers this to be a significant component of the Preferred Citywide Remedy.

Comment Number 29: *Construction activities near a school may necessitate the closure of windows, resulting in decreased ventilation. If this situation occurs then an alternate means of ventilation must be installed in a school.*

Response: As explained in the response to Comment Number 28, EPA believes that optimizing the ventilation in a school is necessary for reduction of the indoor PCB air concentrations. However, EPA is concerned with long-term exposure to PCBs above the Agency's screening levels (<http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/maxconcentrations.htm>). While EPA recognizes that each situation is unique, the Agency would expect most construction activities to be of a limited duration and so the decreased ventilation associated with window closure would not be expected to significantly contribute to the overall exposure to PCBs. We

will recommend that the DOE consider impacts to ventilation and corrective actions in situations where a ventilation system is unable to perform adequately due to external factors.

Best Management Practices (BMPs)

Comment Number 30: *Deteriorated caulk is overplayed at the expense of intact caulk. The preferred remedy should account for all caulk (intact and deteriorating).*

Response: EPA Region 2 agrees that the preferred remedy must address both intact and deteriorating caulk. It should be noted that the peer reviewers were not consistent in their recommendations to focus on either intact or deteriorated caulk (or both). EPA is aware that intact caulk could contain PCBs at higher concentrations than deteriorating caulk. Furthermore, as stated in the April 19, 2012 BMPs approved by EPA at <http://www.nycsca.org/Community/Programs/EPA-NYC-PCB/PCBDocs/EPAApprBestMgtPractices.pdf>, the goal of the BMPs are to develop methods to manage the potential impacts of PCB caulk, manage deteriorating caulk, and minimize potential exposure to PCB caulk through direct contact, inhalation or ingestion. Since intact caulk may present a source of PCBs into the indoor air, EPA will recommend to the DOE that it review the BMPs to determine if revisions are necessary.

Comment Number 31: *The BMPs lack sufficient detail on how cleaning/maintenance staff are to protect themselves from exposure:*

Response: EPA Region 2 believes that there must be a safe working environment for the cleaning and maintenance staff. However, it is the primary responsibility of the DOE to insure a safe working environment for its staff. While EPA has developed general recommendations for housekeeping in schools (<http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/pdf/caulkschools1.pdf>), the Agency recommends that individuals with specific concerns regarding potential exposure of the cleaning/maintenance staff to PCBs contact the DOE.

Health Concerns

Comment Number 32: *Please describe the health concerns or effects individuals should look for with exposure to PCBs.*

Response: Chronic low-dose exposure to PCBs consistent with the exposure scenario in NYC schools would not be expected to result in health effects or symptoms that would be easily observed and/or readily recognized by a lay person. Perhaps the most characteristic health effect associated with exposure to PCBs is chloracne (a severe form of acne characterized by

an eruption of blackheads, cysts, and pustules) but this has been typically associated with high-dose occupational exposures. The more subtle health effects associated with chronic low-dose environmental exposure (reduced thyroid hormone and antibody levels, increase in liver enzymes, cognitive/developmental effects) would require medical evaluation and laboratory testing to diagnose.

Comment Number 33: *Please explain if there are guidelines for using soil that could be contaminated with PCBs.*

Response: The following web sites for the EPA and the New York State Department of Environmental Conservation (NYSDEC) (<http://www.epa.gov/osw/hazard/tsd/pcbs/pubs/pcb-guid3-06.pdf>), (http://www.dec.ny.gov/docs/remediation_hudson_pdf/cpsoil.pdf) should be consulted for in depth guidance on PCB contaminated soil. In general, both EPA and NYSDEC recommend a soil clean-up goal of 1 part per million for residential properties and 10 to 25 parts per million for commercial/industrial land use. The SCA used the more conservative 1 part per million as a clean-up goal for school soil sampling.

Comment Number 34: *No one knows how serious the health risks are to the school community (staff and students).*

Response: Comprehensive large scale studies of health effects to staff and students from PCB exposure in schools have not been performed. It would also be very difficult to develop a dose reconstruction model to reasonably estimate what exposure levels were to staff and students in the past. Two important variables that would influence the model's results and would need to be known are the number and severity of ballast failures along with detailed knowledge of classroom ventilation rates. Despite these limitations, EPA's existing risk-based indoor air exposure guidelines for PCBs (<http://www.epa.gov/pcbsincaulk/pdf/maxconcentrations.pdf>) are intended to be protective of human health with an adequate margin of safety.

Comment Number 35: *Worker exposure should be monitored during specific remediation tasks to make sure exposure controls are adequate.*

Response: OSHA has the primary responsibility to insure a safe working environment for occupationally exposed individuals. OSHA has specific air levels for the PCBs known as Aroclor 1254 (0.5 milligrams per cubic meter) and Aroclor 1242 (1 milligram per cubic meter). While not intended for worker monitoring purposes, PCB indoor air concentrations obtained in New York City public schools have not exceeded OSHA's levels. EPA has developed more stringent exposure guidelines (<http://www.epa.gov/pcbsincaulk/pdf/maxconcentrations.pdf>) for school staff (teachers, administrators, custodians) not specifically engaged in PCB remediation activities.

Comment Number 36: *Please explain if modeling can be performed to determine prior exposure.*

Response: As noted above in the response to Comment Number 34, it would be very difficult to develop a dose reconstruction model to reasonably estimate what exposure levels were to staff and students in the past. Such a modeling exercise would likely have a high degree of uncertainty/variability making the model output of questionable utility.

Comment Number 37: *There is a need to conduct human health evaluations.*

Response: Because PCBs are ubiquitous in the environment and a significant amount of PCB exposure can be due to an individual's diet, EPA believes that it would be very difficult to conclude that PCBs within a particular school are causing health problems. However, if an individual believes that PCBs within a particular school are compromising the health of the school community, then the individual should contact the Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR has the capacity, expertise and directive to conduct human health evaluations of populations exposed to environmental contaminants (i.e., Public Health Assessments). General information on ATSDR Public Health Assessments can be found at <http://www.atsdr.cdc.gov/hac/PHAManual/toc.html>. Information on petitioning ATSDR for a Public Health Assessment can be found at http://www.epa.gov/ttn/atw/urban/petition_fs.pdf.

Outreach to the Public

Comment Number 38: *There is a concern with the extent of the outreach efforts as they pertain to the public meetings. EPA should consider extending the public comment period and expanding outreach.*

Response: EPA Region 2 believes there has been a sufficient level of outreach and opportunity for public participation. EPA's outreach efforts included notifying the media and stakeholders of the public meetings as well as the availability of relevant information on the Agency's web site (<http://www.epa.gov/Region2/pcbs/index.html>). Additionally, the DOE provided translation support and committed to notifying the individual Community Education Councils.

Comment Number 39: *Please explain if the public meeting presentation could be made to individual school districts.*

Response: The public meeting presentation as well as supporting materials are available on EPA's web site (<http://www.epa.gov/Region2/pcbs/index.html>). EPA encourages school communities to freely disseminate these materials within the school communities and to contact EPA with any questions that may arise.

Comment Number 40: *There should be same day notification of parents when children are evacuated following a PCB light fixture failure.*

Response: EPA Region 2 agrees that there should be expeditious communication between the DOE and the school community. The City's re-occupancy protocols currently state that the DOE will make best efforts to provide the principal a letter to backpack to parents within 24 hours of reporting of the incident, but at a maximum, such letter will be issued within 48 hours except in the event of a weekend or recess period; in such cases a letter will be sent within 48 hours upon the students return to school.

Comment Number 41: *There is a need for a detailed plan for engaging and communicating with the public about remediation progress/efficacy in the schools.*

Response: The DOE developed a Citizen Participation Plan for the Pilot Study; this document can be found at: <http://www.nycsca.org/Community/Programs/EPA-NYC-PCB/PCBDocs/EPAApprCitPartPlan.pdf>. EPA's formal agreement with New York City requires the City to develop a subsequent plan for communicating and engaging the public as schools are addressed City-wide. If there are specific recommendations to improve the Citizen Participation Plan, they can be directed to the Chief of Staff for the Deputy Chancellor, within DOE's Division of Operations.

Comment Number 42: *The Preferred Remedy should be amended to clarify that no work will take place while any school in the building (public or charter) is in session, and that the principal of every school in the building has given advance written consent.*

Response: It is important that any remedial work performed in the schools is accomplished in a manner that does not present risks to the school community. EPA's understanding is that, to date, DOE has strived to perform work outside of school hours or in unoccupied areas. Concerns regarding specific school buildings should be raised to the DOE's attention.

Other Comments

Comment Number 43: *Please proceed with the most aggressive timeline and extent possible for remediation of PCBs in the schools.*

Response: The comment is noted. EPA's goal is to ensure a safe and healthy environment for the school community in the most expedient manner possible.

Comment Number 44: *Suggested edits to the Summary Report were provided to EPA.*

Response: New York City submitted the Summary Report in accordance with its formal agreement with EPA. The suggested edits will be provided to the DOE for consideration.

Comment Number 45: *Significant window replacement projects should only be scheduled when students/staff are not present, and PCB air sampling should be performed for clearance before re-occupancy.*

Response: EPA Region 2 believes that work must be scheduled when students and staff are not present to minimize potential exposure. Furthermore, the Agency has developed the following guidance on handling PCBs in caulk during renovation:

<http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/caulkcontractors.htm>

The guidance recommends air testing to determine if PCBs are present in the school or building. However, as explained previously there is no regulatory requirement to test the air for PCBs. The SCA has established procedures to control dust during its capital improvement projects and EPA Region 2 believes that these measures will control the spread of any PCBs that could be bound to the dust particles.

Comment Number 46: *There is a concern with PCBs in project buildings and private residences.*

Response: EPA has had discussions with the United States Department of Housing and Urban Development (HUD) regarding the potential presence of PCBs in project buildings and has provided HUD with guidance relative to this issue. With regard to private residences, PCBs could potentially be present in multi-unit (attached) residences constructed prior to 1980. The Agency does not have any information indicating that PCBs were used in the construction of detached private residences.

Comment Number 47: *There is a concern over the health effects of energy efficient lighting.*

Response: EPA Region 2 is unaware of any studies definitively linking newer lighting with specific health effects. Energy efficient lighting has been successfully used in buildings throughout the country. It can help individuals save money, use less energy, reduce light bulb changes, and lower greenhouse gas emissions, which lead to climate change. While compact fluorescent lights and other fluorescent light bulbs contain a small amount of mercury sealed within the glass tubing, modern fluorescent lighting has lower amounts of mercury than the older lighting that is being replaced. When a fluorescent bulb breaks in your home, some of this mercury is released as mercury vapor. To minimize exposure to mercury vapor, EPA recommends that individuals follow the cleanup and disposal steps described at on its web page (<http://www2.epa.gov/cfl/cleaning-broken-cfl>).